CLAIM AMENDMENTS

1. (Currently Amended) An ozone generator for generating ozone by applying a specified process to ~~an~~ oxygen ~~gas by~~ in a discharge, comprising:

a first raw material gas supply unit for supplying ~~the~~ oxygen ~~gas~~ as a first raw material gas; and

a second raw material gas supply unit for supplying an oxide compound gas as a second raw material gas, wherein ~~by,~~ excited light, excited and generated by the discharge ~~under existence of~~ in the oxygen ~~gas~~ and the oxide compound gas, dissociates the oxide compound gas ~~is dissociated,~~ or excites the oxide compound gas ~~is excited to have an~~, accelerating ~~action of~~ dissociation of the oxygen ~~gas~~, and ~~the~~ generating ozone ~~is generated~~.

2. (Currently Amended) ~~An~~ The ozone generator according to claim 1, wherein the oxide compound gas is nitrogen dioxide, and the ~~nitrogen dioxide of~~ oxygen contains from 0.0002 ppm to several tens of ppm ~~is contained in~~ of the ~~oxygen gas~~ nitrogen dioxide.

3. (Currently Amended) An ozone generator for generating ozone by applying a specified process to ~~an~~ oxygen ~~gas by~~ in a discharge, comprising:

a first raw material gas supply unit for supplying ~~the~~ oxygen ~~gas~~ as a first raw material gas; and

a second raw material gas supply unit for supplying ~~a~~ nitrogen dioxide ~~gas~~ as a second raw material gas, wherein the ozone is generated through excitation by the discharge ~~under existence of~~ in the oxygen ~~gas~~ and the nitrogen dioxide ~~gas~~.

4. (Currently Amended) An ozone generator~~,~~ comprising:

a first electrode;

a second electrode facing the first electrode ~~to form~~ and defining a discharge area;

a first raw material gas supply unit for supplying ~~an~~ oxygen ~~gas~~ as a first raw material gas;

a second raw material gas supply unit for supplying a second raw material gas as an oxide compound gas or ~~capable of~~ generating an oxide compound gas; and

a third raw material gas supply unit for supplying a third raw material gas, which is excited by a discharge and generates excited light to dissociate the oxide compound gas or to excite the oxide compound gas to accelerate dissociation of the oxygen ~~gas~~, wherein an AC voltage is applied between the first electrode and the second electrode from a power supply to

~~inject~~ supply discharge power to the discharge area, ~~specified~~ quantities of the raw material gases are supplied by the first ~~to the~~, second, and third raw material gas supply units ~~are supplied~~ to a space where the discharge is generated ~~between gaps of~~ in the discharge area, and ~~an~~ ozone ~~gas~~ is generated.

5. (Currently Amended) ~~An~~ The ozone generator according to claim 4, wherein by the oxygen ~~gas~~ as the first raw material gas, the second raw material gas, the third raw material gas, and the discharge,

i) the oxide compound gas exists,

ii) the excited light is generated by excitation of a gas atom or a gas molecule of the third raw material gas by the discharge,

iii) an oxygen atom is generated by a chemical reaction of the oxide compound gas and the excited light, or by a photocataltic reaction of the oxide compound gas, and

iv) the ozone is generated by a binding action with the oxygen gas as the first raw material gas.

6. (Currently Amended) ~~An~~ The ozone generator according to claim 4, wherein the second raw material gas is ~~one~~ selected from ~~a~~ the group consisting of nitrogen dioxide, nitrogen monoxide, nitrogen, carbon dioxide, and carbon monoxide, and the second raw material gas ~~of~~ is contained in the oxygen in a concentration from 0.2 ppb to several ~~hundred~~ hundreds of ppm ~~is contained in the oxygen gas~~.

7. (Currently Amended) ~~An~~ The ozone generator according to claim 4, wherein the third raw material gas is ~~one~~ selected from ~~a~~ the group consisting of a noble gas, nitrogen monoxide, nitrogen dioxide, and carbon dioxide, and the third raw material gas is contained in the oxygen in a concentration of from several hundred ppm to 50000 ppm ~~is contained in the oxygen gas~~.

8. (Currently Amended) ~~An~~ The ozone generator according to claim 4, ~~wherein~~ including a cylinder in which the second raw material gas is added to the third raw material gas ~~is used~~, and the second raw material gas and the third raw material gas are added to the first raw material gas.

9. (Currently Amended) An ozone generator, comprising:

a first electrode;

a second electrode facing the first electrode ~~to form~~ and defining a discharge area;

a first raw material gas supply unit for supplying ~~an~~ oxygen ~~gas~~ as a first raw material gas;

a second raw material gas supply unit for supplying a second raw material gas as one of nitrogen dioxide, nitrogen monoxide, nitrogen, carbon dioxide, and carbon monoxide; and

a third raw material gas supply unit for supplying a third raw material gas as one of a noble gas, nitrogen monoxide, nitrogen dioxide, and carbon dioxide, wherein an AC voltage is applied between the first electrode and the second electrode from a power supply to ~~inject~~ supply discharge power to the discharge area, ~~specified~~ quantities of the raw material gases are supplied by the first ~~to the~~, second, and third raw material gas supply units ~~are supplied~~ to a space where the discharge is generated ~~between gaps of~~ in the discharge area, and ~~an~~ ozone ~~gas~~ is generated.

10. (Currently Amended) ~~An~~ The ozone generator according to claim 9, wherein the second raw material gas is ~~one~~ selected from ~~a~~ the group consisting of nitrogen dioxide, nitrogen monoxide, nitrogen, carbon dioxide, and carbon monoxide, and the second raw material gas ~~of~~ is contained in the oxygen in a concentration from 0.2 ppb to several ~~hundred~~ hundreds of ppm ~~is contained in the oxygen gas~~.

11. (Currently Amended) ~~An~~ The ozone generator according to claim 9, wherein the third raw material gas is ~~one~~ selected from ~~a~~ the group consisting of noble gas, nitrogen monoxide, nitrogen dioxide, and carbon dioxide, and the third raw material gas is contained in the oxygen in a concentration of from several hundred ppm to 50000 ppm ~~is contained in the oxygen gas~~.

12. (Currently Amended) An ozone generator~~,~~ comprising:

a first electrode;

a second electrode facing the first electrode ~~to form~~ and defining a discharge area;

a first raw material gas supply unit for supplying ~~an~~ oxygen ~~gas~~ as a first raw material gas;

a photocatalytic material ~~provided~~ on a dielectric substrate located in the discharge area or on the first electrode ~~and~~ for absorbing light in a specified wavelength range, or a material transformed into a photocatalyst by a discharge; and

a third raw material gas supply unit for supplying a third raw material gas which is excited by the discharge and generates excited light to excite the photocatalytic material

to accelerate dissociation of the oxygen ~~gas~~, wherein an AC voltage is applied between the first electrode and the second electrode from a power supply to ~~inject~~ supply discharge power to the discharge area, ~~specified~~ quantities of the raw material gases are supplied by the first ~~to the~~, second, and third raw material gas supply units ~~are supplied~~ to a space where the discharge is generated ~~between gaps of~~ in the discharge area, and ~~an~~ ozone ~~gas~~ is generated.

13. (Currently Amended) ~~An~~ The ozone generator according to claim 12, wherein the ~~photocataltic~~ photocatalytic material is ~~one~~ selected from ~~a~~ the group consisting of WO_3 ~~material~~, CrO_2 ~~material~~, Fe_2O_3 ~~material~~, TiO_2 ~~material~~, a metal-semiconductor ~~material~~ structure, and a ferroelectric material.

14. (Currently Amended) ~~An~~ The ozone generator according to claim 12, wherein the ~~photocataltic~~ photocatalytic material ~~is constituted by plural~~ includes a plurality of different ~~photocataltic~~ photocatalytic materials.

15. (Currently Amended) ~~An~~ The ozone generator according to claim 12, wherein the third raw material gas is ~~one~~ selected from ~~a~~ the group consisting of a noble gas, nitrogen monoxide, nitrogen dioxide, and carbon dioxide, and the third raw material gas is contained in the oxygen in a concentration of from several hundred ppm to 50000 ppm ~~is contained in the oxygen gas~~.

16. (Currently Amended) An ozone generator according to claim 12, ~~wherein~~ including a cylinder in which the third raw material gas is added to the first raw material gas ~~is used~~.

17. (Currently Amended) An ozone generator~~,~~ comprising:

a first electrode;

a second electrode facing the first electrode ~~to form~~ and defining a discharge area;

a first raw material gas supply unit for supplying ~~an~~ oxygen ~~gas~~ as a first raw material gas;

a photocatalytic material ~~provided~~ on a dielectric substrate located in the discharge area or on the first electrode and ~~for~~ absorbing light in a specified wavelength range, or a material transformed into a photocatalyst by a discharge;

a second raw material gas supply unit for supplying a second raw material gas as an oxide compound gas or ~~capable of~~ generating an oxide compound gas ~~by~~ in response to the discharge; and

a third raw material gas supply unit for supplying a third raw material gas which is excited by the discharge and generates excited light to excite the photocatalytic material and the oxide compound gas to generate an oxygen atom, wherein an AC voltage is applied between the first electrode and the second electrode from a power supply to ~~inject~~ supply discharge power to the discharge area, ~~specified~~ quantities of the raw material gases are supplied by the first ~~to the~~, second, and third raw material gas supply units ~~are supplied~~ to a space where the discharge is generated ~~between gaps of~~ in the discharge area, and ~~an~~ ozone ~~gas~~ is generated.

18. (Currently Amended) ~~An~~ The ozone generator according to claim 17, wherein the ~~photocataltic~~ photocatalytic material is one selected from a group consisting of WO_3 ~~material~~, CrO_2 ~~material~~, Fe_2O_3 ~~material~~, TiO_2 ~~material~~, a metal-semiconductor ~~material~~ structure, and a ferroelectric material.

19. (Currently Amended) ~~An~~ The ozone generator according to claim 17, wherein the ~~photocataltic~~ photocatalytic material ~~is constituted by plural~~ includes a plurality of different ~~photocataltic~~ photocatalytic materials.

20. (Currently Amended) ~~An~~ The ozone generator according to claim 17, wherein the second raw material gas is ~~one~~ selected from ~~a~~ the group consisting of nitrogen dioxide, nitrogen monoxide, nitrogen, carbon dioxide, and carbon monoxide, and the second raw material gas ~~of~~ is contained in the oxygen in a concentration from 0.2 ppb to several ~~hundred~~ hundreds of ppm ~~is contained in the oxygen gas~~.

21. (Currently Amended) ~~An~~ The ozone generator according to claim 17, wherein the third raw material gas is ~~one~~ selected from ~~a~~ the group consisting of a noble gas, nitrogen monoxide, nitrogen dioxide, and carbon dioxide, and the third raw material gas is contained in the oxygen in a concentration of from several hundred ppm to 50000 ppm ~~is contained in the oxygen gas~~.

22. (Currently Amended) ~~An~~ The ozone generator according to claim 17, ~~wherein~~ including a cylinder in which the second raw material gas is added to the third raw material

gas ~~is used~~, and the second raw material gas and the third raw material gas are added to the first raw material gas.

23. (Currently Amended) ~~An~~ The ozone generator according to claim 17, ~~wherein~~ including a cylinder in which the second raw material gas and the third raw material gas are added to the first raw material gas ~~is used~~.